From: Avolta News hello@avoltapartners.com

Subject: [VC: €173m] [Exits: 3 deals]
Date: 13 December 2024 at 13:39
To: admin@idvector.com

Google's Quantum Leap: A Step Closer to the Future

<u>Google's Willow chip</u> represents a major milestone in the quest for practical quantum computing. With innovations in error correction and scalability, this breakthrough sets the stage for quantum computers to move closer to real-world applications, even as challenges remain.

Quantum computing operates on qubits, which harness quantum phenomena like superposition and entanglement to perform calculations far beyond the reach of classical computers. However, qubits are inherently unstable, making error correction essential for scalability. Google's Willow chip employs logical qubits—clusters of physical qubits working together—to reduce errors exponentially as the number of qubits increases. This achievement, known as crossing the "error correction threshold," has been a critical goal in the field since the 1990s.

The chip's performance is staggering. It solved a benchmark problem in under five minutes, a task that would take classical supercomputers billions of years. While this feat showcases quantum supremacy in controlled environments, the specific benchmark used has limited practical applications. Still, it proves that quantum systems can outperform classical ones under certain conditions, building confidence in the technology's potential.

Google is not alone in the quantum race. IBM, for example, is exploring alternative architectures for error correction, while French startup <u>Quobly focuses on siliconbased qubits for scalable, cost-efficient solutions</u>. Quobly aims to reach a million qubits by 2031, leveraging its partnership with STMicroelectronics to integrate control systems directly onto chips. This diversity of approaches highlights the global push to make quantum computing practical and accessible.

Despite the advancements, <u>quantum computers capable of breaking modern cryptography are still years away</u>. Experts estimate that systems with millions of qubits would be required to crack encryption like RSA. For now, the focus remains on applications such as material discovery, optimization problems, and advanced AI models, areas where quantum computing could deliver unparalleled breakthroughs. Google's progress underscores the transformative potential of quantum computing. While the field is still in its infancy, advancements like Willow demonstrate that the path to scalable, fault-tolerant quantum systems is becoming clearer. As competition intensifies, the coming decade promises to be a defining era for this revolutionary technology.

VC trends (week 50)

VC Deals: €173.4m

#Sector #BusinessModel #Focus

Aqemia

Generative AI platform dedicated to drug discovery

Founded in: 2019 Series: B extension

New Money in press: €36m

Investors: Cathay Innovation, Wendel, Bpifrance,

Eurazeo, Elaia Partners

#AI #Research #B2B

Bsport

Provider of a software to digitize gyms and wellness centers

Founded in: 2018

Series: B

New Money in press: €30m

Investors: Base10, Octopus Ventures, Seed4Soft

#Software #Subscription #B2B

Wecasa

Home services marketplace

Founded in: 2016

Series: B

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new woney in press: €18m

Investors: Serena, blisce/, Isai, iXO Private Equity

#Marketplace #Commission #B2C

Biomemory

DNA-based rewriting and storage of digital data

Founded in: 2021

Series: A

New Money in press: €17m

Investors: Crédit Mutuel Innovation, Blast.club, Sorbonne Venture, Adnexus, Next Finance, Paris

Business Angels, Prunay Impact, Bpifrance, Accelerem

#Data #Research #B2B

DFNS

Cryptocurrency secured wallet-as-a-service provider

Founded in: 2020

Series: A

New Money in press: €15m

Investors: Wintermute Ventures, White Star Capital, SIG, Semantic Ventures, Motive Partners, Motier

Ventures

#Crypto & Defi #Subscription #B2C

DeepLife

Artificial intelligence modelling digital twins of cells for drug discovery

Founded in: 2019

Series: A

New Money in press: €9.5m

Increteur. V7D Canital Tomana Commo Dalamadam

investors: YZM Capital, Turenne Groupe, belersoon,

Groupe Prunay

#AI #Research #B2B

Pathway

Platform for integrating new data into artificial intelligence systems

Founded in: 2020

Series: A

New Money in press: €9.4m

Investors: TQ Ventures, Kadmos Capital, ID4 Ventures,

Inovo VC, Market One Capital

#AI #Subscription #B2B

Ion-X

Ion motor for small satellites

Founded in: 2021

Series: A

New Money in press: €9m

Investors: EIC Fund, Ile-de-France Réindustrialisation

(Innovacom), Expansion, Technofounders

#Aerospace #Selling own inventory #B2B

Uptale

Immersive and experiential virtual reality training

Founded in: 2017

Series: A

New Money in press: €9m

Investors: Arkéa Capital, Go Capital, Business Angels

Syroco

Energy efficiency optimization software for commercial vessels

Founded in: 2019

Series: A

New Money in press: €7.5m

Investors: Alter Equity, Seventure Partners, Business

Angels

#Software #Subscription #B2B

Bitstack

Bitcoin savings solution

Founded in: 2021

Series: A

New Money in press: €5m

Investors: Stillmark, Serena, Plug and Play, Y

Combinator, Founders Future, Station F

#FinTech #Commission #B2C

DashBook

Al transforming online content into books

Founded in: 2021 Series: Seed

New Money in press: €3m (including €1.0m debt)

Investors: Seventure Partners

#Software #Subscription #B2B

Yampa

Al agents for customer relations

Founded in: 2024 Series: Seed

New Money in press: €3m

Investors: Partech, Business Angels

#AI #Subscription #B2B

Objow

Provider of a multi-use case engagement platform

Founded in: 2019 Series: Seed

New Money in press: €2m

Investors: Edenred Ventures, Crédit Agricole Création,

HUB612 Participations, Holnest, Bpifrance

#Software #Subscription #B2B

Exits

#Sector #BusinessModel #Focus

ArtMajeur

Online art marketplace

→ Acquired by **YourArt**

Founded in: 2009

Deal Type: Corporate Development

Acquirer Country: France

#Marketplace #Commission #B2C

Corhize

Crop irrigation management solutions

→ Acquired by **Weenat**

Founded in: 2007

Deal Type: Corporate Development

Acquirer Country: France

#Software #Subscription #B2B

Wibilong

Conversational Saas between brands and users

→ Acquired by **Epsilon (Publicis)**

Founded in: 2020

Deal Type: Corporate Development

Acquirer Country: France

#Software #Subscription #B2B

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With 130 deals executed for €3bn in total over the last 11 years, Avolta is one of the most active Tech M&A advisors in Europe. Based on this expertise, Avolta's team of 20 people has maximised the value of each and every deal in terms of valuations and overall conditions – this due to its time-tested sectorial methodology and expert negotiating skills.



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Sources: Dealroom, CFNEWS (also for the equity / non equity ratio), press releases & specialized press.

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